UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE – SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

MEMORANDUM

DATE: October 9, 2019

SUBJ: Request for a Removal Action at the 1071 Main Street Site, Woburn, MA - **Action Memorandum**

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TO: Bryan Olson, Director
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I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of the proposed removal action at the 1071 Main Street Site (the Site), which includes two properties located at 1071 and 1073 Main Street (a.k.a. Route 38) in Woburn, Middlesex County, Massachusetts (MA). Hazardous substances present in soil at the Site (polychlorinated biphenyls (PCBs) and metals), if not addressed by implementing the response actions selected in this Action Memorandum, will continue to pose a threat to human health and the environment. There are no nationally significant or precedent-setting issues associated with this Site, and there has been no use of the OSC's $200,000 warrant authority.

II. SITE CONDITIONS AND BACKGROUND

CERCLIS ID# : MAD981068711
SITE ID# : 01PF
CATEGORY : Time-Critical

A. Site Description

1. Removal site evaluation

In a letter dated April 8, 2019, Massachusetts Department of Environmental Protection (MassDEP) requested EPA's assistance to address contaminated soil, stockpiles, and containerized waste at the Site. In April – May 2019, EPA conducted a Preliminary Assessment (PA) including a review of pre-existing reports which contained soil sampling data from the Site. The data showed elevated levels of PCBs and metals on 1071 Main Street and the adjacent residential property located at 1073 Main Street.

From May 20-22, EPA conducted a Site Investigation (SI) at both properties by collecting and analyzing soil samples (0-3 feet bgs). Based on the MassDEP's request, on the 1071 Main Street Property, EPA focused on stockpiles #3 - #9. Analysis of the samples confirmed the presence of PCBs in stockpile #9 at levels that exceeded the EPA Removal Management Levels (RMLs[1]) for an industrial property. The remaining piles contained levels of PCBs and arsenic below the RMLs-Industrial but above the RMLs-Residential. During the investigation, EPA observed damage to the chain-link fence that would allow easy access to the 1071 Main Street Property.

On the 1073 Property, EPA collected soil samples from the back and side yards. Analysis of the samples confirmed the presence of PCBs and lead at levels above the RMLs - Residential. Access to the yard is restricted by fencing. However, the residents have access and the area is partially composed of landscaped grass and garden.

The findings of the PA/SI are documented in a September 10, 2019 Site Investigation Closure Memorandum with the recommendation that a time critical removal action be conducted.

2. Physical location

The property located at 1071 Main Street, is identified on Woburn Tax Assessor's Map 8, Block 7, Lot 18. To date, the property use has been commercial/industrial, but the property is currently zoned residential (R-2). The geographical coordinates of the Site from the approximate center of the 1071 Main St property are 42° 31′ 05.11″ north latitude and 71° 09′ 29.80″ west longitude. The property located at 1073 Main Street is identified on Map 08, Block 7, Lot 17. This property is zoned residential (R-2).

3. Site characteristics

The 1071 Main Street property consists of approximately 4.45 acres located in a primarily residential area of Woburn, MA. The legal address is 1071R Main Street, with driveway access along Main Street, approximately 500 feet northeast from the intersection of Main Street and

[1] U.S. Environmental Protection Agency. *https://www.epa.gov/risk/regional-removal-management-levels-chemicals-rmls. November 2018*

Wheeling Street. A second driveway is located on Main Street at the north end of the property adjacent to the 1073 Main Street property.

The 1071 Main Street property contains no structures and is currently vacant and inactive. The surface is unpaved with the exception of the two entrances off Main Street. The property is generally flat, with an excavated area in the center approximately 3 feet deep. Twenty-nine stockpiles of soil labelled #1 through #29 by the MassDEP are present. The stockpiles consist of varying material, including soil generated from recent excavation activities; imported clean fill and imported crushed stone; building demolition debris; and wood brush generated from site clearing. Piles #3 through #9 located along the northeast portion of the property were generated during a Release Abatement Measure (RAM) cleanup in 2015. The combined volume of soil of piles #3 through #9 is approximately 1500 cubic yards.

According to the MassDEP, the stockpiles were initially covered with visqueen (polyethylene plastic sheets) and then tarps. However, these have degraded in the sun and no longer provide cover. Although vegetation is currently growing on these stockpiles, this growth is sparse and erosion of the piles is occuring.

Several containers are present on the southwestern end of the property. One 55-gallon metal drum was empty, and one 55-gallon metal drum appeared to contain used PPE. Many of the 5-gallon containers were empty; approximately 14 containers contained some form of product, possibly oily residues mixed with rainwater.

The property is surrounded by a chain-link fence, with two locked gates, although there is one area along Main Street where the fence was collapsing, allowing access to the Site. This area of the fence has been repaired recently. The fence has been damaged in the past and repairs are a temporary fix. The property is overgrown in many areas but does not offer protection to trespassers and workers.

The 1073 Main Street property consists of an occupied residential property, approximately 0.22 acres, with a single-family home. There are no known sources of contamination on this property. Access to the back and side yards is restricted by a wooden fence and a chain link fence.

The Site is bordered to the north, east, and south by residential properties; and to the west by Main Street and residential properties. According to the EPA Region I ER Site Report, approximately 500 people live within a quarter mile. The nearest residential properties are adjacent to the Site along the northern, eastern, and southern boundaries. Residences are also located across Main Street along the western boundary. The Altevesta Elementary School is located approximately 400 feet to the southwest along Main Street.

[1] U.S. Environmental Protection Agency. *https://www.epa.gov/risk/regional-removal-management-levels-chemicals-rmls. November 2018*

Based on observations made at the Site, this is not an Environmental Justice (EJ) area. In addition, EPA's EJSCREEN environmental justice screening tool indicates that 0 out of 11 Environmental Justice Indexes for the area within a one-mile radius of the Site exceed the 80th percentile on a national basis.

Incident Category - Former Tannery and other industries.
The 1071 Main Street property has a history of commercial and industrial use beginning in the early 20th century. From 1928 to 1957, Woburn Hide and Leather Tannery operated on the property. From the 1960s to circa 2004, the property was occupied by various tenants including: a construction company, an autobody/engine repair center, a plywood and lumber warehouse, a microwave warehouse, a landscaper, an outboard motor engine repair company, a waste transport company, and an illegal rubbish transfer station There are numerous violations on file at the Woburn Building Department and Board of Health indicating poor housekeeping issues, violations, and multiple citizens complaints regarding historical operations.

From 2004-2015, Ben-Val Realty (Ben-Val) Trust LLC conducted several investigations and a cleanup under MassDEP oversight. Subsequently, a developer, 1071 Village, LLC, leased the property and performed additional work with the goal of acquiring the property for redevelopment. Ultimately, the cleanup became too expensive for the Parties to complete.

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

According to previous investigations (See section B.1. below), hazardous substances as defined by Section 101(14) of CERCLA, 42 U.S.C. §9601(14), and 40 CFR § 302.4 are present at the Site including: metals (lead, arsenic, and chromium) and PCBs. On May 20–22, 2019, EPA conducted a site investigation of the soil contamination at both properties. Based on MassDEP's investigation results, on 1071 Main Street, EPA focused the investigation on stockpiles #3 through #9. On 1073 Main Street, EPA focused on the soil in the back and side yards. The results are summarized below.

1071 Main Street

PCB Aroclor-1254 was detected at a maximum concentration of 350 mg/kg which exceeded the EPA RML[1]-Industrial of 44 mg/kg. This result was in Stockpile 9. No other PCB sample results exceeded the RML-Industrial on this property. However, Stockpiles 4, 5, 6, and 7 exceeded the RML-Residential and are above the cleanup goal of 1 ppm (See Table below). No other PCB Aroclors were detected.

[1] U.S. Environmental Protection Agency. *https://www.epa.gov/risk/regional-removal-management-levels-chemicals-rmls. November 2018*

Arsenic and lead were not detected above the RML-Industrial levels in any stockpiles. However, they were detected at levels exceeding the RML-Residential in stockpiles #3 and #7. Chromium was not detected above the RMLs. Analytical results for the 1071 Main Street property are summarized in the table below and in the PA/SI report, *Removal Program Preliminary Assessment/Site Investigation Report for the 1071 Main Street Site Woburn, Middlesex County, Massachusetts, 20 through 22 May 2019* Appendix A, Figures 6A and 6B, and Appendix B, Table 5.

Summary of Results 1071 Main Street

Stockpile	Maximum Concentrations			
	PCBs	As	Pb	Cr_{Total}
	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
RML Ind	44	300	800	NA
RML Res	3.5	68	400	NA
3	ND	92	17	18
4	9.6	16	190	150
5	8.4	13	260	77
6	7.5	20	240	72
7	8.8	19	590	74
8	0.93	13	57	66
9	350	13	110	88
S1/GW-1[A]	1	200	20	1000
Imminent Hazard[B]	10	N/A	40	N/A[C]

[A]Massachusetts Contingency Plan 310 CMR 40.0975(6)(a): Table 2 Method 1 Standards
[B]Massachusetts Contingency Plan 310 CMR 40.0321(2): Reporting of Releases and Threats of Release that Pose or Could Pose an Imminent Hazard
[C]The MassDEP has determined that the chromium on-site is Cr^{+3}.
Yellow highlight indicates the result exceeds the RML – Residential.
Red Highlight indicates the results exceeds both the RML Residential and Industrial.
Note: 1071 Main Street is a former industrial property that is currently zoned residential.

The impacted soil on the 1071 Main Street property is stockpiled and is not covered or fully vegetated. There is a potential threat for erosion and for the contamination to spread around the property. In addition, contaminated dust could be generated and blown off Site onto adjacent residential properties. EPA assessed the potential for dust generation during its investigation and found that while dust was generated, the amount was below levels of concern. However, the threat may increase as weather erodes the piles.

Exposure pathways to trespassers and workers include direct contact with soil. Also, dust generated from the stockpile presents a potential threat of exposure to local residents through inhalation.

[1] U.S. Environmental Protection Agency. *https://www.epa.gov/risk/regional-removal-management-levels-chemicals-rmls. November 2018*

Analysis of the drum and container samples indicated that the contents of the containers was water. PCB analysis of the container samples indicated that no PCBs were present.

1073 Main Street

PCB Aroclor-1254 was detected at a maximum concentration of 330 mg/kg; this exceeded both the RML-Residential (3.5 mg/kg).

Lead was detected at a maximum concentration of 1,100 mg/kg which is above the RML-Residential (400 mg/kg). Arsenic and chromium were not detected above their respective RML-Residential values. Analytical results for the 1073 Main Street Property are summarized in the table below and in *Removal Program Preliminary Assessment/Site Investigation Report for the 1071 Main Street Site Woburn, Middlesex County, Massachusetts, 20 through 22 May 2019* Appendix A, Figures 7A and 7B, and Appendix B, Table 6.

Summary of Results 1073 Main Street

Contaminants		PCBs	Pb	As	Cr_{Total}
RML-Res	mg/kg	3.5	400	68	N/A
Max Conc.	mg/kg	330	1100	24	93
# of Exceedances RML -Residential		8	2	0	0
S1/GW-1[A]	mg/kg	1	200	20	1000
Imminent Hazard[B]	mg/kg	10	N/A	40	N/A[C]

[A]Massachusetts Contingency Plan 310 CMR 40.0975(6)(a): Table 2 Method 1 Standards
[B]Massachusetts Contingency Plan 310 CMR 40.0321(2): Reporting of Releases and Threats of Release that Pose or Could Pose an Imminent Hazard
[C]The MassDEP has determined that the chromium on-site is Cr^{+3}.
Yellow highlight indicates the result exceeds the RML – Residential.
Note: 1073 Main Street is a residential property

There is no paper documentation of the release of PCBs or lead at the property. It likely originated from the former industrial facilities at the 1071 Main Street property. Based on the concentration gradients at the property, higher in the surface soil than at depth, the release was likely to the surface soil.

The potential for migration of the PCB contamination is limited on the 1073 Main Street property as it is in the soil under maintained grass and an overgrown wooded area. Exposure pathways include direct contact with soil in the backyard by residents and visitors of the house.

[1] U.S. Environmental Protection Agency. *https://www.epa.gov/risk/regional-removal-management-levels-chemicals-rmls. November 2018*

5. NPL status

The Site is not currently on the National Priorities List and has not received a Hazardous Ranking System rating and referral to the NPL Site assessment program is not anticipated.

6. Maps, pictures and other graphic representations

See Figures and Tables in *Removal Program Preliminary Assessment/Site Investigation Report for the 1071 Main Street Site Woburn, Middlesex County, Massachusetts, 20 through 22 May 2019.*

B. Other Actions to Date

1. Previous actions

EPA has not conducted previous actions at this Site.

2. Current actions

Current actions by EPA include the PA/SI conducted in April and May 2019.

C. State and Local Authorities' Roles

1. State and local actions to date

The MassDEP has overseen the investigation and cleanup activities conducted by the PRP and other parties under the Massachusetts Contingency Plan (MCP). Between 2004 and 2014, EBI and other environmental consultants completed multiple environmental site assessments at the Property for prospective buyers of the property. The majority of this work was reportedly conducted for 1071 Village LLC, the (then) lessee of the Property who was scheduled to obtain ownership in 2015.

On December 23, 2014, EBI, on behalf of 1071 Village, LLC, submitted a 120-Day Release Notification Form (RNF) to the MassDEP. The RNF listed antimony, chromium (III), and PCBs as the released OHM, with concentrations of each exceeding MCP RCS-1 concentrations.

From March through May, 2015, a Release Abatement Measure (RAM) was conducted by EBI on behalf of 1071 Village LLC. EBI removed approximately 2,153 tons of PCB and metals impacted soil from the Property under the RAM and a Self Implementing Plan. Soils that were not transported off-site were secured with polyethylene sheeting and separated from adjacent parcels by fencing. Two storage tanks were removed from the Property during RAM activities: one 3,000-gallon fuel oil UST, and one 275-gallon waste oil AST.

[1] U.S. Environmental Protection Agency. *https://www.epa.gov/risk/regional-removal-management-levels-chemicals-rmls. November 2018*

In September 2015, Woodard & Curran submitted an IRA Plan on behalf of Ben-Val to conduct IRA activities, including the erection of restrictive fencing, posting of warning signage, installation of siltation and hay bale fencing along the eastern portion of the Site, covering exposed soil with polyethylene sheeting to prevent access and exposure to airborne dusts, and shallow soil sampling on adjacent properties to identify if PCBs are present in off-property soils.

In February 2016, Woodard and Curran submitted a Phase I report on behalf of Ben-Val. After this work was completed the Ben-Val ceased conducting clean-up activities due to financial limitations.

In 2018, the MassDEP engaged Weston and Sampson to conduct an environmental assessment. The results were documented in, Weston & Sampson, *Summary Letter documenting an Environmental Assessment at the 1071 Main Street Property*, July 2018.

In June 2019, after EPA's sampling event, the MassDEP engaged a contractor to encapsulate the soil piles to prevent dust generation and soil erosion. The encapsulant is temporary, only designed to function for approximately four months.

2. Potential for continued State/local response

EPA coordinated with both the State and the City during the PA/SI. Both the MassDEP project manager and the City Environmental Manager were on-scene during part of the Site investigation.

Both MassDEP and the City of Woburn are unable to obtain funds or must delay the response for an unacceptable period of time (based on the exigency of the situation) to provide funding to conduct further cleanup activities at the Site.

MassDEP continues to work with EPA providing assistance by communicating updates to the residents, a local concerned citizen group, and the City of Woburn.

III. THREATS TO PUBLIC HEALTH OR WELFARE OR THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

As described below, the conditions at the Site meet the general criteria for a removal action, as set forth in 40 C.F.R. §300.415(b)(1), in that "there is a threat to public health or welfare of the United States or the environment," and in consideration of the factors set forth in 40 C.F.R. §300.415(b)(2) as described below.

[1] U.S. Environmental Protection Agency. *https://www.epa.gov/risk/regional-removal-management-levels-chemicals-rmls. November 2018*

The following information is from ToxFAQs which are summaries about hazardous substances and their health effects. ToxFAQs are published by the Agency of Toxic Substances and Disease Registry (ATSDR):

ToxFAQs for Polychlorinated Biphenyls, August 2014:

Polychlorinated biphenyls (PCBs) are a mixture of individual chemicals which are no longer produced in the United States but are still found in the environment.

The most commonly observed health effects in people exposed to large amounts of PCBs are skin conditions such as acne and rashes. Studies in exposed workers have shown changes in blood and urine that may indicate liver damage. PCB exposures in the general population are not likely to result in skin and liver effects. Most of the studies of health effects of PCBs in the general population examined children of mothers who were exposed to PCBs.

Animals that ate food containing large amounts of PCBs for short periods of time had mild liver damage and some died. Animals that ate smaller amounts of PCBs in food over several weeks or months developed various kinds of health effects, including anemia; acne-like skin conditions; and liver, stomach, and thyroid gland injuries. Other effects of PCBs in animals include changes in the immune system, behavioral alterations, and impaired reproduction. PCBs are not known to cause birth defects.

Few studies of workers indicate that PCBs were associated with certain kinds of cancer in humans, such as cancer of the liver and biliary tract. Rats that ate food containing high levels of PCBs for two years developed liver cancer. The Department of Health and Human Services (DHHS) has concluded that PCBs may reasonably be anticipated to be carcinogens. PCBs have been classified as probably carcinogenic, and carcinogenic to humans (group 1) by the Environmental Protection Agency (EPA) and International Agency for Research on Cancer (IARC), respectively.

ToxFAQs for Lead, Updated May 2019:

Lead is a naturally occurring metal found in small amounts in the earth's crust. Lead can be found in all parts of our environment, including air, water and soil. Lead can exist in many different chemical forms.

The effects of lead are the same whether it enters the body through inhalation or ingestion. Lead can affect almost every organ and system in your body. The nervous system is the main target for lead toxicity in adults and children.

Long-term exposure can result in decreased learning, memory, and attention and weakness in fingers, wrists, or ankles. Lead exposure can cause anemia and damage to kidneys. It can also

[1] U.S. Environmental Protection Agency. *https://www.epa.gov/risk/regional-removal-management-levels-chemicals-rmls. November 2018*

cause increases in blood pressure, particularly in middle-aged and older individuals. Exposure to high lead levels can severely damage the brain and kidneys and can cause death. In pregnant women, exposure to high levels of lead may cause a miscarriage. High-level exposure in men can damage reproductive organs.

Children are more vulnerable to lead poisoning than adults because their nervous system is still developing. Children can be exposed to lead in their environment and prior to birth from lead in their mother's body. At lower levels of exposure, lead can decrease mental development, with effects on learning, intelligence and behavior. Physical growth may also be decreased. A child who swallows large amounts of lead may develop anemia, severe stomachache, muscle weakness, and brain damage. Exposure to lead during pregnancy can result in premature births. Some effects of lead may persist into adulthood.

ToxFAQs for Arsenic, Updated May 2019:

Arsenic is a naturally occurring element widely distributed in the earth's crust. Arsenic can be found in all parts of our environment, including air, water and soil, and can exist in many different chemical forms.

Exposure to arsenic can pose a threat to human health. Breathing high levels of inorganic arsenic can give you a sore throat or irritated lungs. Ingesting very high levels of arsenic can result in death. Exposure to lower levels can cause nausea and vomiting, decreased production of red and white blood cells, abnormal heart rhythm, damage to blood vessels, and a sensation of "pins and needles" in hands and feet.

Ingesting or breathing low levels of inorganic arsenic for a long time can cause a darkening of the skin and the appearance of small "corns" or "warts" on the palms, soles, and torso. Skin contact with inorganic arsenic may cause redness and swelling.

Several studies have shown that ingestion of inorganic arsenic can increase the risk of skin cancer and cancer in the liver, bladder, and lungs. Inhalation of inorganic arsenic can cause increased risk of lung cancer. The Department of Health and Human Services (DHHS) and the EPA have determined that inorganic arsenic is a known human carcinogen.

Threats to public health or welfare Section 300.415(b)(2) of the NCP

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants; [§300.415(b)(2)(i)];

PCBs are present in surface soil at levels that present a potential threat to human health and welfare. PCB concentrations were recorded at levels exceeding the RML-Industrial and RML–

[1] U.S. Environmental Protection Agency. *https://www.epa.gov/risk/regional-removal-management-levels-chemicals-rmls. November 2018*

Residential levels at both the 1071 and 1073 Main Street properties. The Site is located in the densely populated city of Woburn, MA and Main Street (a.k.a. Route 38) is a busy thoroughfare. Although the Site is surrounded by a chain-link fence, the fence has been compromised and must be maintained on a continual basis. Trespassers and workers may be exposed by direct contact with PCB and arsenic impacted soil at the 1071 Main Street property by walking or climbing on the soil piles. Residents and visitors of the 1073 Main Street property may be exposed by direct contact with PCB and lead impacted soil by walking or playing in the back and side yards. Actual effects on human or animal health (e.g., illness, injury, death) linked to the site contamination have not been reported or documented.

High levels of hazardous substances or pollutants or contaminants in soil largely at or near the surface, that may migrate [§300.415(b)(2)(iv)];

On the 1071 Main Street property, the PCB impacted soil is stockpiled. The piles were covered with visqueen and tarps which have since disintegrated due to environmental factors. Dust may be generated from the dry soil and may blow onto adjacent residential properties. This situation may be exacerbated by erosion of the stockpile due to precipitation.

Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released [§300.415(b)(2)(v)];

Weather (e.g., sun and wind) may cause dust generation from the stockpiles which may blow onto adjacent residential properties causing exposure through inhalation or direct contact. Precipitation may further erode the stockpile exacerbating the potential for dust generation and the spread of PCBs.

The availability of other appropriate Federal or State response mechanisms to respond to the release [§300.415(b)(2)(vii)];

No other Federal or State response mechanisms are able to respond to the release. Due to the lack of available resources, MassDEP requested that EPA perform a removal action.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from this Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

In accordance with OSWER Directive 9360.0-34 (August 10, 1993), an endangerment determination is made based on appropriate Superfund policy or guidance which is outlined and discussed in Section III above. Appropriate sources include, but are not limited to, relevant

[1] U.S. Environmental Protection Agency. *https://www.epa.gov/risk/regional-removal-management-levels-chemicals-rmls. November 2018*

action level or clean-up standards, Agency for Toxic Substances and Disease Registry documents or personnel, or staff toxicologists.

In this case, EPA relied on the EPA RML for industrial and residential uses for PCBs, arsenic, and lead to initiate the cleanup and the MassDEP Residential Standard for Soil Category S-1/GW1 (20 mg/kg for arsenic and 200 for lead) as target cleanup levels. EPA also consulted with EPA's Regional PCB Coordinator for determining risk at the Site posed by PCBs in soil.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

The removal action will protect public health, welfare, and the environment from the threats identified in Section III by excavating contaminated soil from portions of the Site, where PCBs, and/or arsenic and lead were detected in surface soil at levels exceeding both EPA RMLs and MassDEP soil cleanup standards. The contaminated soil will be disposed of at an EPA approved off-site facility.

1. Proposed action description

General removal activities will include the following:

- •Conduct a site walk with the cleanup contractor;
- •Conduct additional sampling as needed to define the vertical extent of contamination;
- •Install security fencing as needed;
- •Provide security guard service as needed;
- •Clear vegetation and debris as needed;
- •Characterize the wastes for disposal;
- •Excavate and stockpile impacted soil;
- •Dispose of hazardous substances at EPA-approved off-site disposal facilities;
- •Repair response-related damage; and
- •Return site management to MassDEP.

Specific removal activities will include the following:

1071 Main Street

Specific actions for 1071 Main Street will include:

- Remove soil pile #9 for off-site disposal because the PCB levels exceed the RML-Industrial standard;
- Stabilize remaining piles #3 through #8 on-site to prevent dust migration and soil erosion. Stabilization includes: Pull back stockpiled soil (piles #3 thru #8) away from fence line adjacent to residential properties and relocate in a centralized area of the 1071 Main

[1] U.S. Environmental Protection Agency. *https://www.epa.gov/risk/regional-removal-management-levels-chemicals-rmls. November 2018*

Street property. Lower the berm height by spreading out and stabilize with hydroseed or other long-term encapsulant suitable to prevent dust migration and soil erosion.

- Line the open excavation area (approximately 1,500 yd^3 capacity) with poly, backfill lined excavation to capacity with nearby contaminated debris and soil piles, and cover with clean fill currently stored on-site. Note, some piles contain non-friable asbestos-containing materials (ACMs) such as building materials, in additional to heavy metals and PCBs. The piles will be kept segregated so wastes are not mixed.
- Characterize and remove containerized hazardous waste for off-site disposal, including an open 55-gallon drum and multiple 5-gallon pails of unknown material.

The goal on this property is the removal of some impacted materials and stabilization and isolation of the stockpiles. After the removal action is completed, management of the Site will return to the MassDEP for additional investigation and cleanup required to achieve Site closure under the MCP. No post-removal action samples will be collected to characterize the residual concentrations of the contaminants of concern in the underlying soil. No removal action cleanup goals were developed for this property.

1073 Main Street

The specific removal activities for 1073 Main Street include:

- Excavate the top three feet of soil (or until the cleanup goal is reached) in the fenced portion of the rear and side yards to remove PCBs. The estimated volume of soil is 1,000 cubic yards of which 20% is likely to be impacted with PCBs above 50 mg/kg. EPA may conduct minimal excavation below 3 feet bgs if it can bring the concentrations of PCBs below the clean-up goal;
- If the cleanup goal cannot be reached, install a geotextile fabric demarcation layer at the base of the excavation;
- Create two waste streams for disposal purposes, one with less than 50 mg/kg PCBs and the other with greater than 50 ppm PCBs; and
- Backfill with clean fill to present grade and landscape including loam and grass seed, trees etc. to replace existing flora.

The cleanup goals are set by the Massachusetts Contingency Plan and are as follows:
1073 Main Street is an occupied residential property. It is occupied frequently, children are present, the soil is accessible, and the intensity of use can be high. Therefore, the soil is classified as S1. All groundwater in the Commonwealth is classified as GW-3. However, because groundwater in the northeastern portion of the Site is within a medium yield Potentially Productive Aquifer, it is also classified as GW-1 given its potential as a drinking water source. Therefore, the S1/GW-1 and S1/GW-3 standards of the MCP apply at this site and the cleanup goals are:

[1] U.S. Environmental Protection Agency. *https://www.epa.gov/risk/regional-removal-management-levels-chemicals-rmls. November 2018*

PCBs = 1 mg/kg
As = 20 mg/kg
Pb = 200 mg/kg
Cr^{Total} = 1,000 mg/kg (Note, MassDEP has determined that chromium at this Site is Cr+3)

2. Community relations

EPA will remain involved with the local community, including the local concerned citizens neighborhood group, during the course of the removal action through press releases, fact sheets, and public meetings, as necessary. The OSC will receive assistance from the EPA Community Involvement Coordinator (CIC) with all public relations activities. EPA will work closely with the state, town, government, local businesses, and the community to coordinate communication activities. The MassDEP has established a Site website which the community has adopted and has offered this service to EPA for outreach.

3. Contribution to remedial performance

The cleanup proposed in this Action Memorandum is designed to mitigate the threats to human health and the environment posed by the Site. The actions taken at the Site would be consistent with and will not impede any future responses.

This action is being taken at the request of and in coordination with MassDEP.

4. Description of innovative technologies and sustainable approaches

In accordance with the December 23, 2013 Memorandum, updated August 02, 2016, issued by Office of Land and Emergency Management as well as the Region 1 Clean and Greener Policy for Contaminated Sites, greener cleanup practices should be considered for all cleanup projects. Greener cleanup is the practice of incorporating practices that minimize the environmental impacts of cleanup actions and maximize environmental and human benefit. Alternative technologies and sustainable approaches will be considered and incorporated, as appropriate, throughout the implementation of the removal action.

5. Applicable or relevant and appropriate requirements (ARARs)

Pursuant to 40 C.F.R. 300.415(j), removal actions shall, to the extent practicable considering the exigencies of the situation, attain ARARs. Current ARARs identified, but not limited to, are listed below.

Clean Water Act, National Pollutant Discharge Elimination System (NPDES), 40 C.F.R. Parts 122 – 125; 122.26: Establishes the specifications for discharging pollutants from any point

[1] U.S. Environmental Protection Agency. *https://www.epa.gov/risk/regional-removal-management-levels-chemicals-rmls. November 2018*

source into the waters of the U.S. Also, includes storm water standards for construction sites over one acre. Removal activities will be managed to prevent stormwater discharge from the Site.

Clean Water Act, 40 CFR Sections 122.26(c)(ii)(C) and 122.44(k): NPDES regulations for storm water control and management.

Clean Air Act, 40 CFR Part 61, 42 U.S.C. Section 112(b)(1): standards for controlling dust. The regulations establish emissions standards for 189 hazardous air pollutants. Standards set for dust and release sources. If the removal of contaminated soils generate regulated air pollutants, then measures will be implemented to meet these standards.

Clean Air Act, National Emission Standards for Hazardous Air Pollutants (NESHAPS: 40 C.F.R. § 61.151): Standards for Inactive waste disposal sites that apply to asbestos mills and manufacturing and fabricating. NESHAPS standards for preventing air releases from inactive asbestos disposal sites, including cover standards, dust suppression, and land use controls.

40 CFR Part 761 Subpart D: TSCA requirements for cleanup and disposal of PCBs. The removal will cleanup up soil on the 1073 Main Street property to 1 ppm for unrestricted use.

40 C.F.R. 761.61(a): Requirements for off-site disposal of bulk PCB remediation wastes and porous and non-porous PCB remediation waste – bulk remediation waste will be managed and disposed of off-site in accordance with these standards.

40 C.F.R. 761.65: Requirements for temporary TSCA regulated waste storage, including design requirements. Proper design considerations will be implemented to ensure that all temporary storage of TSCA-regulated waste satisfies the requirements of the regulations.

40 C.F.R. Section 761.79: TSCA Decontamination of Equipment Used. TSCA decontamination standards and procedures for removing PCBs that are regulated for disposal.

State ARARs:

40 C.F.R. Parts 260-262 and 264 Resource Conservation and Recovery Act, Subtitle C-Hazardous Waste Identification and Listing Regulations; Generator and Handler Requirements, Closure and Post-Closure - Massachusetts has been delegated the authority to administer these RCRA standards through its state hazardous waste management regulations. Waste generated will be tested to determine whether it exceeds hazardous waste thresholds and, if so, the hazardous waste will be managed on-site and until such time as it is shipped to an EPA-approved off-site disposal location.

310 CMR 30.100: Hazardous Waste Rules for Identification and Listing of Hazardous Wastes

[1] U.S. Environmental Protection Agency. *https://www.epa.gov/risk/regional-removal-management-levels-chemicals-rmls. November 2018*

Any wastes generated by removal activities will be analyzed under these standards to determine whether they are characteristic hazardous wastes. Non-hazardous materials will be disposed appropriately. All contaminated soil meeting characteristic hazardous waste standards will be excavated and disposed of off-site at a licensed facility.

310 CMR 30.300: Hazardous Waste Management Rules - Requirements for Generators
If any removal activity generates hazardous wastes, the waste will be managed in accordance with the substantive requirements of these regulations.

310 CMR 7.00: Massachusetts Air Pollution Control Regulations: stipulates that during construction and/or demolition activities, air emissions (i.e., dust, particulates, etc.) must be controlled to prevent air pollution. Construction activities will be managed to meet standards for visible emission (310 CMR Section 7.06): dust, odor, construction, and demolition (310 CMR Section 7.09) and standards for handling, transporting and disposing asbestos (310 CMR Section 7.15). During the removal action, appropriate measures would need to be taken to comply with these regulations.

310 CMR 6.00: Massachusetts Ambient Air Quality Standards sets primary and secondary standards for emissions of certain contaminants including particulate matter. Removal activities, including excavation and management of soil will be implemented in accordance with these rules. Dust standards will be complied with during excavation of the soils at the Site.

6. Project schedule

It is anticipated that the removal action will take approximately two months to complete from the time of initial mobilization. It is possible that this action will begin as soon as the Fall of 2019, but the removal may not be initiated until the Spring of 2020 depending on weather conditions and timing of coordination with the City and landowners.

B. Estimated Costs

COST CATEGORY		**CEILING**
REGIONAL REMOVAL ALLOWANCE COSTS:		
ERRS Contractor		$658,250.00
Interagency Agreement		$ 0.00
OTHER EXTRAMURAL COSTS NOT FUNDED FROM THE REGIONAL ALLOWANCE:		
START Contractor		$212,000.00
Extramural Subtotal		$870,250.00
Extramural Contingency	20%	$174,050.00
TOTAL, REMOVAL ACTION CEILING		**$1,044,300.00**

[1] U.S. Environmental Protection Agency. *https://www.epa.gov/risk/regional-removal-management-levels-chemicals-rmls. November 2018*

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

A delayed or absence of a removal action described herein will cause conditions at the Site to remain unaddressed and the presence of the Site's hazardous substances will continue to pose a threat to human health and the environment.

VII. OUTSTANDING POLICY ISSUES

There are no precedent-setting policy issues associated with this Site.

VIII. ENFORCEMENT ... For Internal Distribution Only

See attached Confidential Enforcement Strategy.
The total EPA costs for this removal action that will be eligible for cost recovery are estimated to be $1,044,300 (extramural costs) + $44,200 (EPA intramural costs) = $1,088,500 X 1.4104 (regional indirect rate) = **$1,535,220** [2].

IX. RECOMMENDATION

This decision document represents the selected removal action for the 1071 Main Street Site in Woburn, MA developed in accordance with CERCLA, as amended, and is not inconsistent with the National Contingency Plan. The basis for this decision will be documented in the administrative record to be established for the Site.

Conditions at the Site meet the NCP Section 300.415 (b) (2) criteria for a removal action due to the following:

Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances or pollutants or contaminants [§300.415(b)(2)(i)];

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[2]Direct Costs include direct extramural costs $1,044,300 and direct intramural costs $44,200. Indirect costs are calculated by using regional indirect rate in effect at time cost estimate is prepared, and is expressed as a percentage of the direct costs 41.04% x $1,088,500, consistent with EPA's full cost accounting methodology effective October 01, 2018. These estimates do not include pre-judgment interest, do not take into account other enforcement costs, including Department of Justice costs, and may be adjusted during the course of a removal action. The estimates are for illustrative purposes only and their use is not intended to create any rights for responsible parties. Neither the lack of a total cost estimate nor deviation of actual total costs from this estimate will affect the United States' right to cost recovery.

[1] U.S. Environmental Protection Agency. *https://www.epa.gov/risk/regional-removal-management-levels-chemicals-rmls. November 2018*

High levels of hazardous substances or pollutants or contaminants in soils largely at or near the surface, that may migrate [§300.415(b)(2)(iv)];

Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released [§300.415(b)(2)(v)];

The availability of other appropriate Federal or State response mechanisms to respond to the release [§300.415(b)(2)(vii)];

I recommend that you approve the proposed removal action. The total extramural removal action project ceiling if approved will be **$1,044,300.00**.

APPROVAL:_____ DATE: 10/21/19

DISAPPROVAL:_____ DATE:_____

[1] U.S. Environmental Protection Agency. *https://www.epa.gov/risk/regional-removal-management-levels-chemicals-rmls. November 2018*